



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
300 W. Preston Street, Suite 202, Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, M.D., Secretary

Office of Preparedness & Response
Sherry Adams, R.N., C.P.M, Director
Isaac P. Ajit, M.D., M.P.H., Deputy Director

September 9, 2011

Public Health & Emergency Preparedness Bulletin: # 2011:35 Reporting for the week ending 09/03/11 (MMWR Week #35)

CURRENT HOMELAND SECURITY THREAT LEVELS

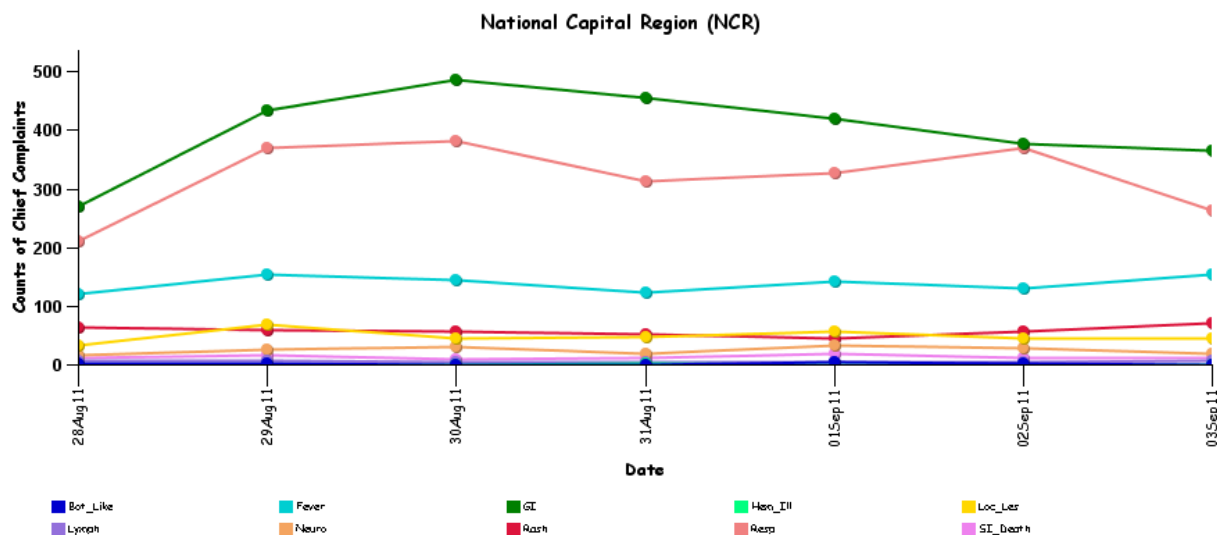
National: No Active Alerts
Maryland: Level One (MEMA status)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

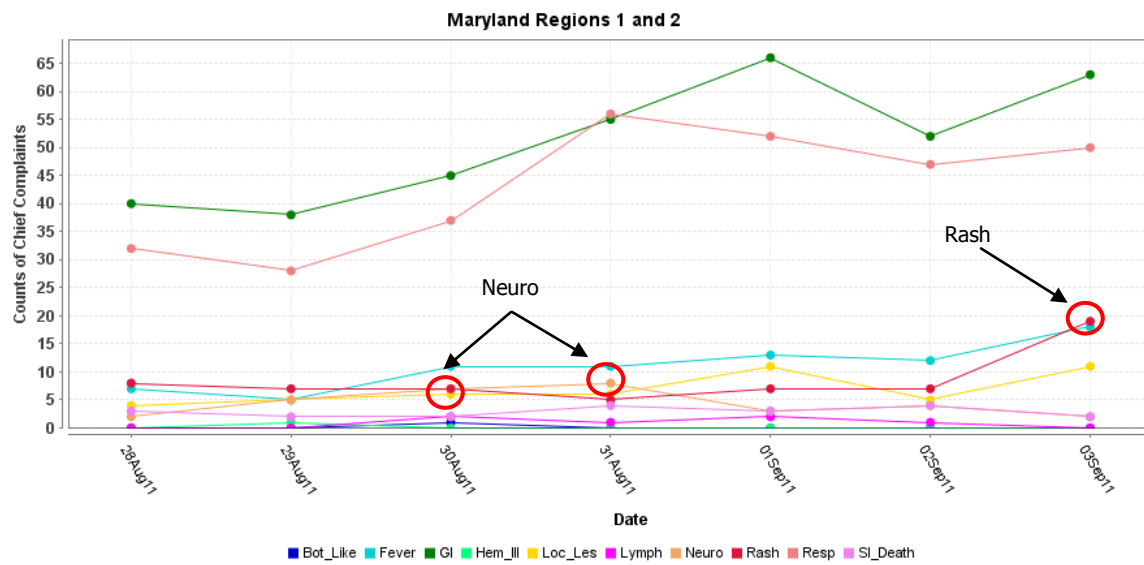
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

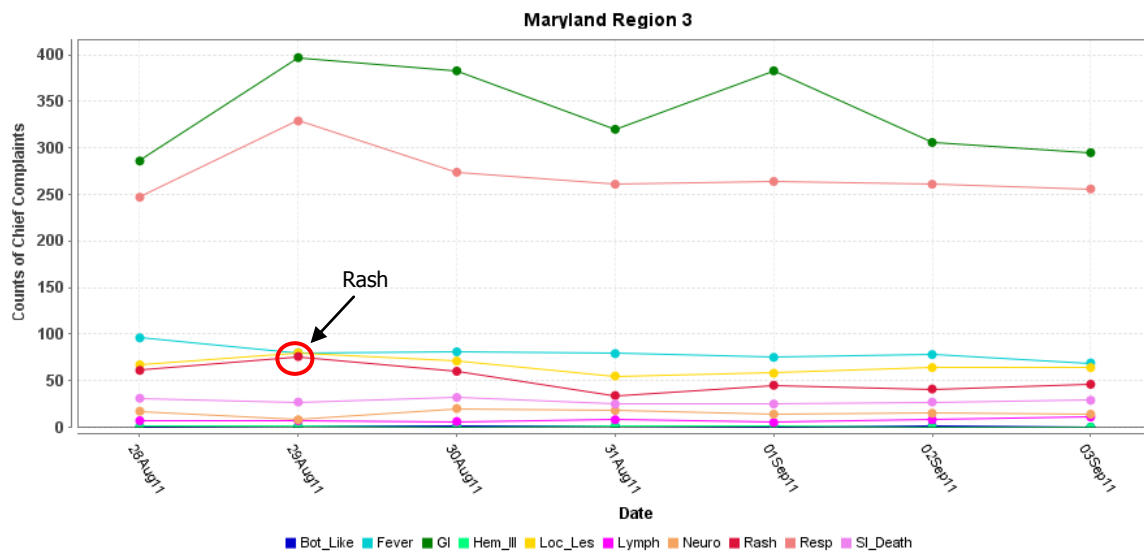


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

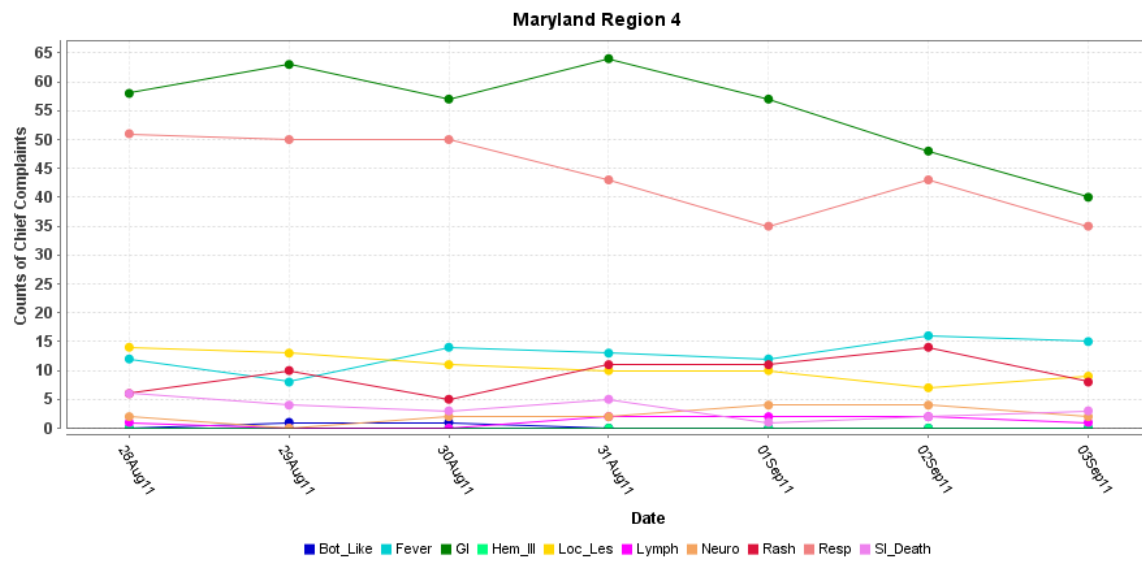
MARYLAND ESSENCE:



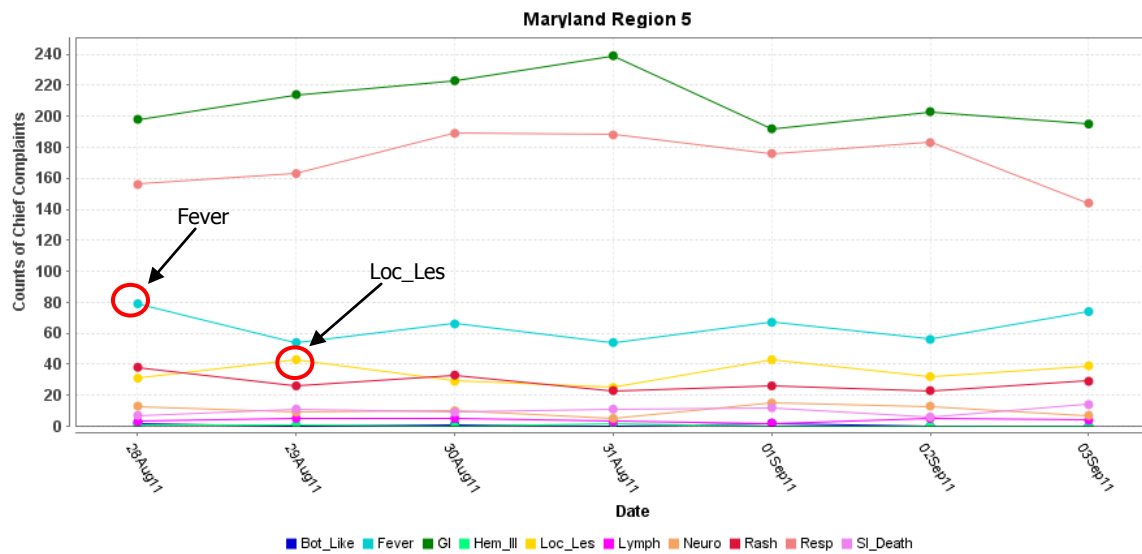
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

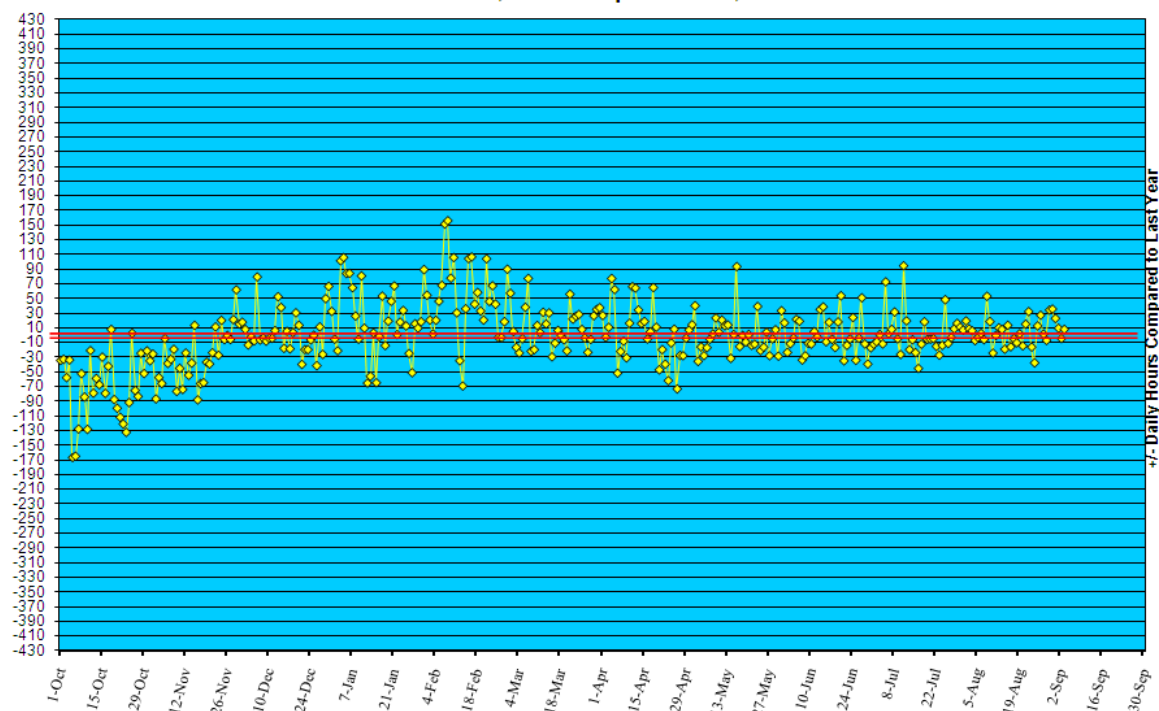


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/10.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '10 to September 3, '11



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in July 2011 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (August 28 – September 3, 2011):	17	0
Prior week (August 21 – August 27, 2011):	17	0
Week#34, 2010 (August 29 – September 4, 2010):	13	0

1 outbreak was reported to DHMH during MMWR week 35 (August 28 – September 3, 2011).

1 outbreak of PNEUMONIA in a nursing home

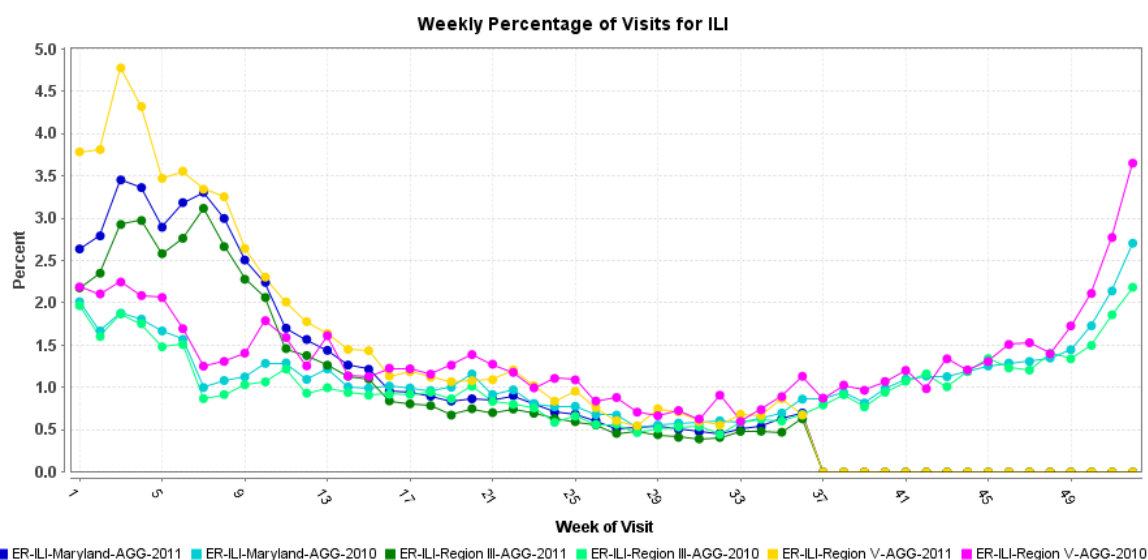
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May.

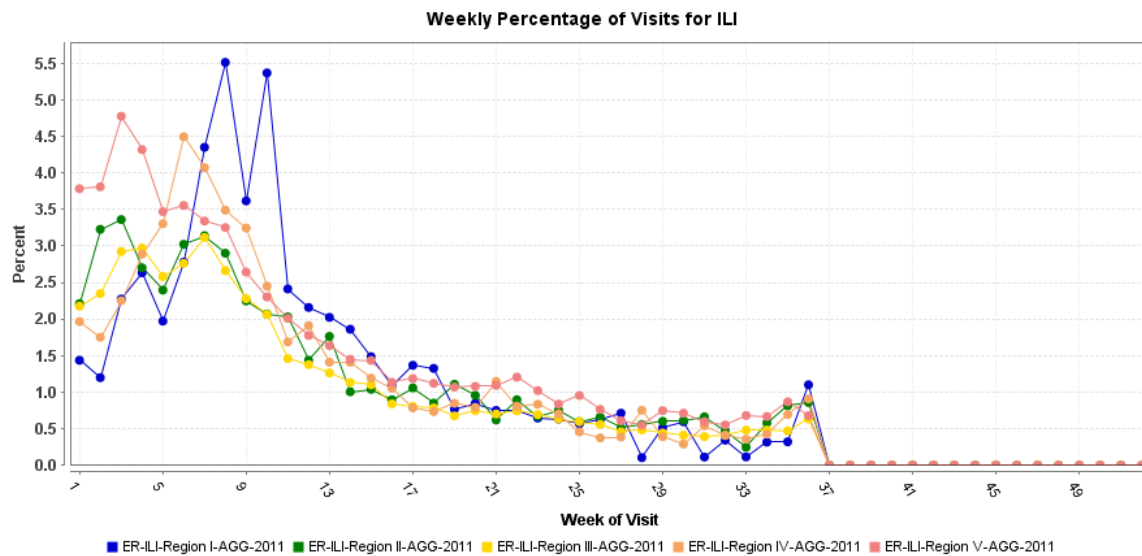
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



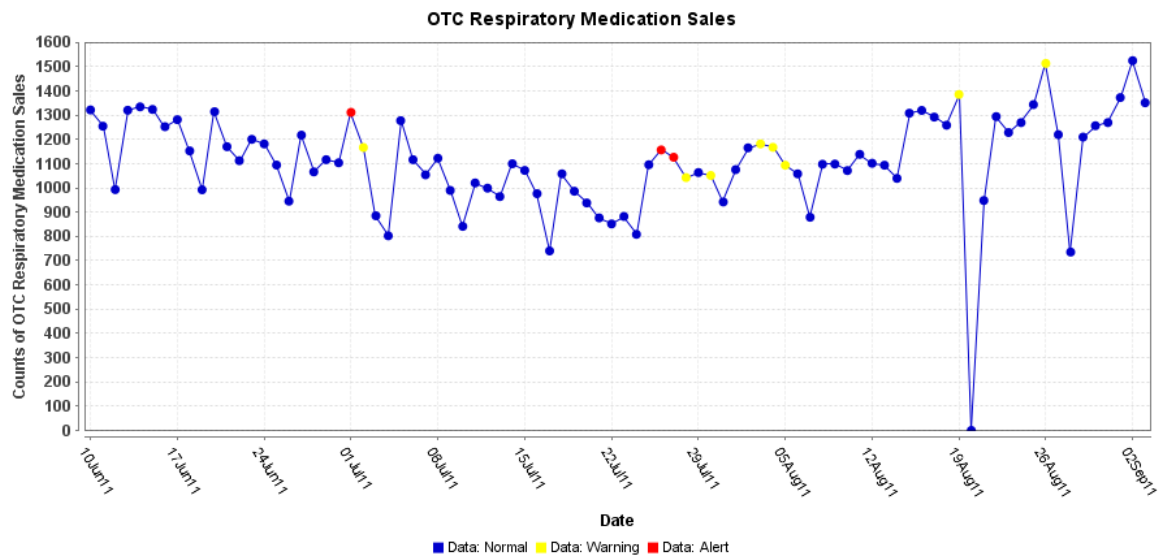
* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2011 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

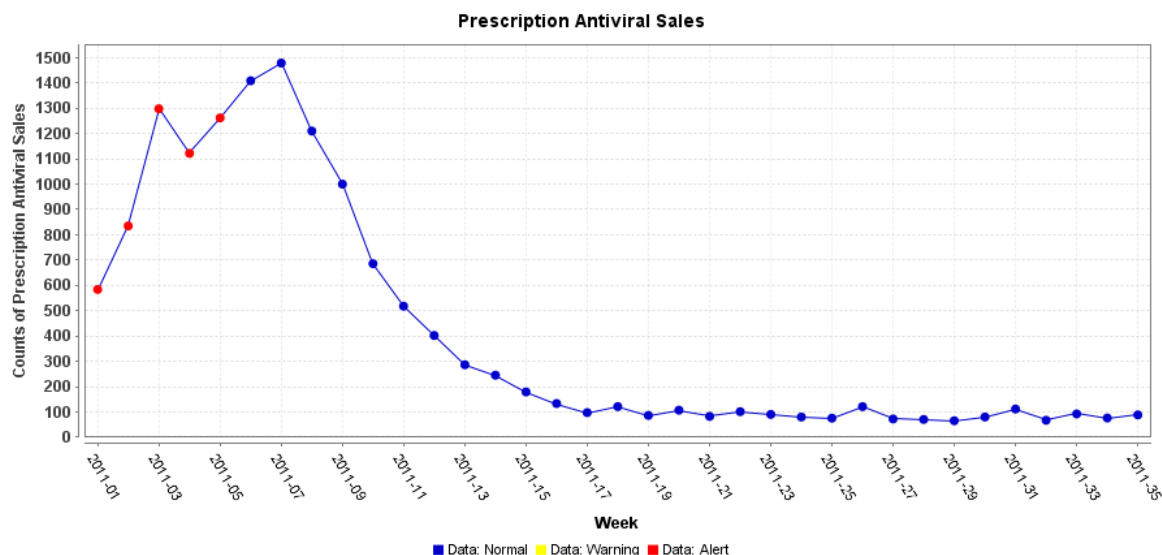
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of August 19, 2011, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 565, of which 331 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA, HUMAN (CAMBODIA): 29 August 2011, The FAO today [29 Aug 2011] urged heightened readiness and surveillance against a possible major resurgence of the H5N1 highly pathogenic avian influenza amid signs that a mutant strain of the deadly bird flu virus is spreading in Asia and beyond, with unpredictable risks to human health. The H5N1 virus has infected 565 people since it 1st appeared in 2003, killing 331 of them, according to WHO figures. The latest death occurred earlier this month [August 2011] in Cambodia, which has registered 8 cases of human infection this year [2011] -- all of them fatal. Since 2003, H5N1 has killed or forced the culling of more than 400 million domestic poultry and caused an estimated USD 20 billion of economic damage across the globe before it was eliminated from most of the 63 countries infected at its peak in 2006. However, the virus remained endemic in 6 nations, although the number of outbreaks in domestic poultry and wild bird populations shrank steadily from an annual peak of 4000 to just 302 in mid 2008. But outbreaks have risen progressively since [then], with almost 800 cases recorded in 2010-2011. At the same time, 2008 marked the beginning of renewed geographic expansion of the H5N1 virus both in poultry and wild birds. The advance appears to be associated with migratory bird movements, according to FAO chief veterinary officer Juan Lubroth. He said migrations help the virus travel over long distances, so that H5N1 has, in the past 24 months, shown up in poultry or wild birds in countries that had been virus-free for several years. "Wild birds may introduce the virus, but peoples' actions in poultry production and marketing spread it," Lubroth noted. Recently affected areas are to be found in Israel and the Palestinian Territories, Bulgaria, Romania, Nepal, and Mongolia. A further cause for concern, Lubroth said, is the appearance in China and Viet Nam of a variant virus apparently able to sidestep the defenses provided by existing [veterinary] vaccines. In Viet Nam, which suspended its springtime poultry vaccination campaign this year [2011], most of the northern and central parts of the country -- where H5N1 is endemic -- have been invaded by the new virus strain, known as H5N1 - 2.3.2.1. Viet Nam's veterinary services are on high alert and reportedly are considering a novel, targeted vaccination campaign this fall [2011]. Virus circulation in Viet Nam poses a direct threat to Cambodia, Thailand, and Malaysia as well as endangering the Korean peninsula and Japan further afield. Wild bird migration can also spread the virus to other continents. "The general departure from the

progressive decline observed in 2004-2008 could mean that there will be a flare up of H5N1 this fall and winter [2011-12], with people unexpectedly finding the virus in their backyard," Lubroth said. The countries where H5N1 is still firmly entrenched -- Bangladesh, China, Egypt, India, Indonesia, and Viet Nam -- are likely to face the biggest problems, but no country can consider itself safe, he said. "Preparedness and surveillance remain essential," Lubroth underlined. "This is no time for complacency. No one can let their guard down with H5N1."

NATIONAL DISEASE REPORTS

ANTHRAX (MN): 30 August 2011, Early diagnosis and treatment were crucial in helping a Florida man beat the odds by recovering from inhalational anthrax, a rare and often deadly disease, according to a Minneapolis physician who treated him. The patient, aged 61, of St Petersburg, Florida, was released from Hennepin County Medical Center (HCMC) in Minneapolis yesterday [29 Aug 2011] after more than 3 weeks of hospitalization, the Minneapolis Star Tribune reported today. He had somehow contracted the disease during a 3 week vacation in Montana, Wyoming, and the Dakotas, and was sick when he arrived in Minnesota near the end of the trip. "I think a key part of his survival was that he was diagnosed reasonably early ... and got started on the right therapy. If that hadn't happened it wouldn't have been good," Dr Mark Sprenkle of the Division of Pulmonary and Critical Care Medicine at HCMC told CIDRAP News. He also said the use of anthrax immune globulin supplied by the Centers for Disease Control and Prevention (CDC) may have contributed to [the man's] recovery. The Minnesota Department of Health (MDH) first reported the anthrax case on 9 Aug 2011, but the patient remained unnamed until today's newspaper story. MDH officials believe [the patient] contracted anthrax through exposure to *Bacillus anthracis* spores in the soil in one of the states he visited. The Federal Bureau of Investigation investigated the case initially but concluded there was no evidence of bioterrorism. [He] was feeling "overtired" when he and his wife arrived in Pelican Rapids, Minnesota, on 3 Aug 2011 to visit friends, according to the Star Tribune. By the next day he was very sick and was hospitalized in Fergus Falls, Minnesota, where he was treated for pneumonia. A doctor there was alarmed by the appearance of his lung x-ray and ordered a lab test, which showed an unusual *Bacillus* strain, the story said. The doctor then sent a sample to the MDH, which confirmed the presence of *B. anthracis*. [The patient] was transferred to HCMC by air ambulance on 7 Aug 2011. When he arrived he was awake and conversant and receiving supplemental oxygen, but his condition deteriorated within a few hours, and he was soon transferred to the intensive care unit (ICU), according to Sprenkle. "By the time he was in the ICU he had pretty severe hypoxia and respiratory distress and was put on a ventilator," he said. Doctors in Fergus Falls had initially treated [him] with antibiotics for bacteria commonly seen in community-acquired pneumonia, but once the anthrax diagnosis came through, they switched to drugs recommended for that disease, Sprenkle said. At HCMC the patient was initially treated with ciprofloxacin and clindamycin, he said. On his 2nd day at HCMC, [the patient] also was treated with anthrax immune globulin provided by the CDC, a product derived from the serum of people who have received the anthrax vaccine, Sprenkle reported. "It's antibodies that can be administered to people who have active infection, to bind up the [anthrax] toxin and mitigate the disease," he said. Sprenkle said [the patient] was only the 19th person to receive the human-derived anthrax immune globulin, which he said wasn't available in 2001 when 22 people contracted anthrax infections after envelopes containing spores were mailed to media outlets and 2 US senators. The immune globulin was used more recently to treat some patients in an outbreak of cutaneous anthrax in Scotland, he said. A supply of human-derived anthrax immune globulin is held in the Strategic National Stockpile of drugs and medical supplies, CDC officials said today [30 Aug 2011], but the amount of the supply is kept secret for security reasons. The product was used successfully to treat an inhalational anthrax patient under an emergency protocol in 2006, according to a 2007 report in Clinical Infectious Diseases. By the time the patient was hospitalized at HCMC, his blood cultures were already negative for *B. anthracis*, but the toxin produced by the bacterium remains after the infection itself subsides, Sprenkle noted. [Thus] another part of the treatment was to drain a buildup of pleural fluid from around his lungs, with the aim of reducing the load of anthrax toxin in his body, Sprenkle said. Fluid around his right lung was drained on his 1st day in the hospital, and the other side was drained the next day. Sprenkle said it is difficult to pinpoint when [the patient] reached a turning point, but he commented, "I think after 7 days I began to feel more confident he was going to be able to get through things." [The man] remained on the ventilator for 10 to 14 days, however. The mortality rate for inhalational anthrax is typically listed at 80 per cent to 90 per cent, but that is based largely on old data, such as an outbreak in Russia in 1979, Sprenkle noted. Mortality in inhalational cases in the 2001 anthrax attacks was more like 45 per cent, he said. In any case, the risk was very serious for [this patient], Sprenkle said, "but there were a lot of things that helped him. He was diagnosed reasonably early, he was put on the right antibiotics reasonably early, and we did the pleural drainage and he received immune globulin." [The man] will need to continue taking oral ciprofloxacin for several more weeks, in line with CDC recommendation for 60 days of treatment in such cases, Sprenkle said. He said his patient may have some lingering effects for a few weeks or longer, but predicted he will recover fully in time. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

YERSINIOSIS (PA): 28 August 2011, Health officials say ice cream from a western Pennsylvania dairy that's had problems with milk may also be tainted. The state Department of Health says consumers and retailers should discard all ice cream purchased from the Brunton Dairy as a precautionary measure, after a test showed the same bacteria that sickened 16 people who drank the dairy's milk. The family-owned Brunton Dairy in Independence Township, Beaver County continues to cooperate with the Department of Health's investigation into yersinia bacteria and voluntarily stopped producing milk and ice cream since the last week in July 2011. The bacteria were discovered in an unopened container of ice cream. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

DIARRHEAL SHELLFISH POISONING (CANADA): 29 August 2011, A shellfish toxin has surfaced in British Columbia (BC) for the 1st time, poisoning 60 people earlier in August 2011 and raising concerns in the province's aquaculture industry. Investigators traced the outbreak to mussels that had been harvested off Cortes Island between 19 Jul 2011 and 2 Aug 2011. The mussels were shipped to retailers and restaurants in British Columbia, Alberta, Saskatchewan, Manitoba, and Ontario under 5 different brand names. Investigators determined the mussels had been contaminated with a biotoxin that causes diarrheal shellfish poisoning [DSP]. "It was the 1st-ever documented DSP outbreak in western Canada," said Dr Eleni Galanis, a physician with the BC Centre for Disease Control, who noted Canada's only other outbreak hit Nova Scotia in the early 1990s. Galanis said DSP is not fatal, but is often accompanied by diarrhea, nausea, vomiting, abdominal cramps, and chills. She said the outbreak surprised officials, but that it was quickly contained through a recall by the Canadian Food Inspection Agency [CFIA]. "We have a lot of lessons to learn from this unusual occurrence," said Galanis, who added work is continuing to determine why it showed up, and what to do if it happens again. "I don't think we can prevent it from occurring in ocean waters," she said, but added that CFIA tests for the poison to prevent contaminated products from making it to consumers. According to the CFIA website, DSP is one of 3 "biotoxins of concern" in Canadian waters, the other 2 being responsible for amnesic shellfish poisoning and paralytic shellfish poisoning. The presence of the toxin in shellfish is impossible for consumers to detect. It cannot be seen, smelled, or tasted. It is also not destroyed by heat, meaning that cooking shellfish does nothing to reduce chances of becoming ill with DSP. There is no antidote, but recovery usually begins within 3 days of consuming the biotoxin. Roberta Stevenson, executive director of the BC Shellfish Growers Association, said DSP is a common toxin in other parts of the world, but not here. "We're studying where did it come from (and) is it here forever?" said Stevenson. "We don't know the answers to those questions." According to a 2004 paper on marine biotoxins prepared by the UN Food and Agricultural Organization, Japan, Europe, Chile, Thailand, Canada (Nova Scotia), and potentially Tasmania and New Zealand have all seen cases of DSP. But the report notes incidents are increasing and "frequently reported from new areas." They are not minor nuisances. In 1984, cases of DSP shut down Sweden's mussel industry for nearly a year. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

LEPTOSPIROSIS (INDIA): 29 August 2011, With 2 more deaths due to leptospirosis, one each in Valsad and Navsari, the total number of deaths due to the deadly disease reached 46 on Saturday [27 Aug 2011]. The number of patients reached 228 with the addition of 6 new patients on Saturday. The patient from Valsad was under treatment in Surat's New Civil Hospital [for the past week]. In south Gujarat, leptospirosis cases are reported in rural areas among those working in farms. The cases are reported during monsoon and in the 3 months of the rainy season. The disease kills more than 100 people of working age every year. According to experts, a human gets leptospirosis [by contact with urine of infected cattle and rats that has contaminated water-logged farms] during monsoon. Medical research reveals that leptospirosis infection spreads to humans through wounds, eyes, and mouth. Rats and cattle are permanent carriers of leptospira bacteria. Medical science observed some effects of leptospira bacteria on cattle, but it recovers without medication in a majority of cases. According to experts working on leptospirosis, currently there is no accurate preventive method to stop the infection of the disease in humans, but it is possible to vaccinate cattle. Along with rats, cattle are major carrier of leptospira bacteria in the south Gujarat region and vaccines are available in foreign countries, but not yet used in India. Surat city became victim of leptospirosis within a week after August 2006 floods when 100 people died of leptospirosis in the city area. The disease was reported for the 1st time within city limits in south Gujarat as it spreads mostly in rural areas. It is believed that the infection spreads across the city [during the 5 days that the entire city was flooded]. Due to flooding, urine of rats, which normally live in drainage ditches or underground, infected humans. (Water Safety Threats are listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

ANTHRAX (ZAMBIA): 3 September 2011, Chama District in Eastern Province has recorded cases of suspected anthrax in more than 120 people. Ministry of Health spokesperson Kamoto Mbewe stated yesterday [2 Sep 2011] that the outbreak was suspected to have been caused by an infected hippo in Luangwa River. Dr Mbewe said all the patients recorded since Friday last week [29 Aug 2011] had a history of having consumed or touched hippo meat. He said the hippo was said to have died of anthrax upstream of the Luangwa River, where 62 hippos had so far died after showing signs of infection. "Areas bordering Chama, or anyone who has consumed hippo meat in the recent past may be affected," he said. Dr Mbewe said, however, that the public should not panic because the disease was treatable and that the ministry had sufficient stocks of drugs. He said samples had been sent to a laboratory in Lundazi and that a rapid response from the provincial office was already in Chama. "A stakeholders' meeting involving the Ministry of Health, the Ministry of Livestock and Fisheries, a veterinary team from the University of Zambia, and a University Teaching Hospital laboratory team was held today [3 Sep 2011]," he said. He said an expert team had been constituted and dispatched to support the province and the affected districts. Dr Mbewe said people who had come in contact with or who had eaten hippo meat in recent weeks and developed skin swellings like insect bites which later become blisters or which eventually ulcerate should quickly seek medical attention. He said the affected areas had been cordoned off and advice provided to people against eating game meat, while surveillance had been enhanced. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmh.maryland.gov/>

Maryland's Resident Influenza Tracking System: <http://dhmh.maryland.gov/flusurvey>

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

Zachary Faigen, MSPH
Biosurveillance Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-6745
Fax: 410-333-5000
Email: ZFaigen@dhmh.state.md.us

Anikah H. Salim, MPH
Biosurveillance Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-2074
Fax: 410-333-5000
Email: ASalim@dhmh.state.md.us